

**REMARKS**

Reconsideration of the application is respectfully requested.

Pending claims 1 to 28 have been cancelled without prejudice. Claim 29 has been allowed and remains pending. New claims 30 to 59 have been added. For the reasons stated below the remaining claims are patentable over the prior art of record and the application stands ready for allowance.

Neither Moi (U.S. Pat. No. 5,938,906) nor Manus (W097/04307) discloses or suggests, alone or in combination, the claimed combination in independent claims 30, 56, or 58. Nor does Perez (U.S. Pat. No. 6,432,262) disclose or suggest, alone or in combination, that which Moi or Manus fail to disclose or suggest.

In the Office Action (paragraph 6), Examiner states that "Moi further discloses a locking means that can only be locked when the walls 240 and 250 are all the down and the planar wall are substantially parallel to each other .... That would read on applicants defined locking means." Even if that statement was accurate with respect to the rejected claims, it is not accurate with respect to applicants' newly submitted claims 30-59.

The Moi disclosure is clearly limited to horizontal gel electrophoresis cassettes as his title, specification, claims and drawings specify. The procedures and apparatus used in horizontal gel electrophoresis are very different from those used in vertical gel electrophoresis, and, in fact, are inadequate, and cannot be used in relation to vertical gel electrophoresis. For example, Moi, column 1, line 67, through column 2, line 1, clearly states his "locking means" prevents "substantial sliding or lifting between the floor and the top...They also prevent the lid from sliding across the tray and, possibly, separating the gel from the cassette." At another location, column 4, lines 26-30, Moi explains that his "locking means" is "a friction fit between the flanges and opposing walls".

Thus, although the horizontal cassette of Moi does have inter-engaging protrusions (171, 172, 173 and 174) and recesses (271, 272, 273 and 274), in light of the remainder of Moi's specification, these do not function as locking means as presently set forth in claims 30-59. Not only do the protrusions and recesses of the cassette of Moi fail to effect any reasonable locking, they do not prevent any locked engagement until the respective wall members are in their exact desired orientation. Rather, the wall members of Moi will be able to engage by means of a friction-fit that is substantively different than when the means of Moi are in the bottom position.

In sum, the procedures and apparatus used in horizontal gel electrophoresis are very different from those used in vertical gel electrophoresis. In fact, as recognized in applicants' specification, the prior art "locking means" used in horizontal cassettes are not suitable for vertical cassettes, and cannot be used in relation to vertical gel electrophoresis. At page 3, lines 8-28, it states, for example, "[T]he connection between the parallel sheets is sometimes effected by the use of corresponding ridges and recesses which form a friction-fit or snap-fit. This means of connecting the parallel sheets has been found to be inadequate." Applicants' specification notes in these prior art "locking means" the connection may not be entirely even along the lengths of the spacers and small gaps may exist at points between the corresponding ridges and recesses (see for example of such gaps the indentation 272 in Fig 3 of Moi et al). The gaps can cause slight variations in the distance between the parallel sheets and can also cause leakage of the gel to occur in vertical cassettes.

Similarly, Manus is directed to a cassette for electrophoretic gels. Presumably, the "locking means" referred to by the Examiner are the complementary ridges 12 and 14 on the opposing plates. Manus, page 6, lines 2-4, states that these ridges "interdigitate to form a seal along each side of the cassette 10 to prevent leakage there through of the gel". As is apparent from the drawings (especially Figures 1 and 2), these ridges engage in a friction-fit and thus

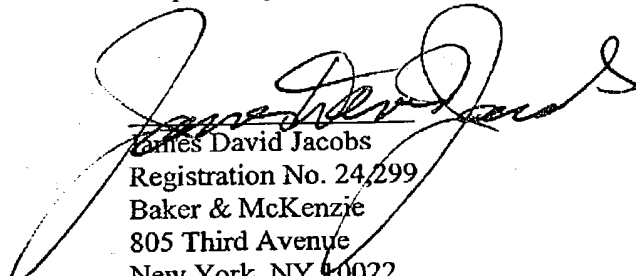
suffer the same deficiencies as does *Moi*.

The remaining reference upon which Examiner relied, Perez, does not correct the deficiencies noted above, alone or in combination, with the other references. Accordingly, claims 30, 56, and 58 are allowable over the prior art of record. Claims 31-55, 57, and 59 depend from on of the foregoing claims and therefore are also allowable.

This communication is believed to be fully responsive to the Office Action and every effort has been made to place the application in condition for allowance. It is submitted that no new issues are being presented by this amendment. In view of the foregoing explanation, a favorable Office Action is hereby earnestly solicited.

If a telephone interview would be of assistance in advancing prosecution of the subject application, Examiner is requested to telephone the number provided below.

Respectfully submitted,



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